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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO.           | CONFIRMATION NO.       |
|--|-------------|-----------------------|-------------------------------|------------------------|
| 10/534,832   | 05/13/2005  | Dirk Gozewinus Simons | 2004-1043                     | 2406                   |
| 466 7590 10/23/2007<br>YOUNG & THOMPSON<br>745 SOUTH 23RD STREET<br>2ND FLOOR<br>ARLINGTON, VA 22202 |             |                       | EXAMINER<br>PIHULIC, DANIEL T |                        |
|  |             |                       | ART UNIT<br>3662              | PAPER NUMBER           |
|  |             |                       | MAIL DATE<br>10/23/2007       | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/534,832

Applicant(s)

SIMONS, DIRK GOZEWINUS

Examiner

Daniel Pihulic

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                      | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
2. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6 and 8-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US5568450 in combination with Lurton et al. The US5568450 reference discloses the utilization of a method for seabed classification, comprising measuring the strength of the acoustic waves reflected from a seabed; and performing an acoustic scattering measurement (see the abstract) as recited in claims 1 and 8. The difference between the US5568450 reference and claims 1 and 8 is that the claims recites the utilization of a search unit, which contains information with regard to different combinations of the values of the first and second attributes, and associates said combinations with respective bottom types; and identifying a bottom type of said location on the basis of the bottom types which the search unit associates with a combination of the first and second attributes. The Lurton et al. reference teaches that it was well known in the art to

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determine a bottom type of an underwater location. It would have been obvious to modify the US5568450 reference to determine a bottom type of an underwater location as motivated by the Lurton et al. reference to enable the US5568450 system to be automated (see columns 1-3).

With regards to claim 2, the US5568450 reference discloses a step of normalizing the measurements (see column 9, lines 48-54).

With regards to claims 3 and 14, the US5568450 reference discloses a step of angle selection (see column 9, line 55- column 10, line 9).

With regards to claims 4, 15 and 16, the US5568450 reference discloses a step of a pulse for the measurements (see column 10, lines 30-43).

With regards to claims 5 and 9, the US5568450 reference discloses a time window for the measurements (see column 10, lines 15-43).

With regards to claims 6 and 17-19, the US5568450 reference discloses the utilization of Lambert scattering for the measurements (see column 9, lines 48-54).

With regards to claims 10 and 11, the US5568450 reference discloses the utilization of sonar system (206).

With regards to claims 12 and 13, the US5568450 reference discloses the utilization of computers and algorithms (see column 14 –column 16).

Claim 7 is rejected under 35 U.S.C. 103 as being unpatentable over US5568450 in combination with Lurton et al. as applied to claim 1 above, and further in combination with US20030206489. The difference between the US5568450 reference and the claim is that the claim recites the utilization of a frequency spectrum that is substantially above 50 KHz. The US20030206489 reference teaches that it was well known in the art to utilize a frequency of 95 KHz in a seabed

classification system. It would have been obvious to modify the US5568450 reference to utilize a frequency of 95 KHz as motivated by the US20030206489 reference to enable the US5568450 system to measure over a wide arc.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pihulic whose telephone number is 571-272-6977. The examiner can normally be reached on Tuesday through Thursday and every other Monday and Friday from 5:30 a.m. to 4 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza, can be reached on 571-272-6979.

The fax phone numbers for the organization where this application or proceeding is assigned are:

571-273-8300 for official responses, and

571-273-6977 for unofficial communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the telephone number 800-786-9199.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

**/Daniel Pihulic/  
Daniel T. Pihulic  
Primary Patent Examiner  
T.C. Art Unit 3662**